

ABSTRACT

A system and method for providing assistance to a position receiver in a location network consisting of a Global Navigation Satellite System (GNSS) and a synchronized network of positioning-unit devices is disclosed. A positioning-unit device observes the time and frequency of received Global Navigation Satellite System (GNSS) signals relative to the synchronized network of positioning-unit devices. These time and frequency observations are modulated, as assistance data, onto the positioning signals that are broadcast by the positioning-unit devices. A position receiver demodulates the assistance data and analyzes the positioning signals. The position receiver then searches for Global Navigation Satellite System (GNSS) signals in a range responsive to the assistance data and the analysis of the received positioning signals.